

I CLAIM

1. A cryogenic refrigerator capable to run with one half the energy, that the latest state of the art 21.9 cubic feet technology household refrigerators consume,
2. A cryogenic refrigerator according to claim 1, where the work done is not based on a compressor and therefore associated vibration and problems related to compressed environmentally hazardous refrigerants are completely avoided,
3. A cryogenic refrigerator according to claim 1, where part of the freezer section volume consists of :

Rectangular prisms in one half part of the total volume of freezer sections, that are part of the external boundaries of a non - circulated nitrogen gas volume container, that functions as a heat sink, as a result of being effectively chilled on a regular basis and kept at a low temperature stable by two fans that create a fast internal air flow.

4. According to claim 3, wherein the metal surrounding the gas nitrogen facilitates a better heat sink than pipes with a compressed gas medium, and consists of:

A container with a boundary connection that is highly heat conductive, to which the heat absorption cells are connected that are metal - copper that absorb and conduct heat better than a gas refrigerant that has to go through phase changes,

5. Based on the method of claim 4, where the heat absorption from the fresh foods section results in a - 5 C degree stable within fresh foods volume,

6. The method of claim 5, where system achieves a stable temperature at - 5 C degrees, that is similar to a natural environment, within volume 25 overall , in terms of other non - temperature variables like moisture level, as well as elimination of static electric accumulation and current leakage, especially in one volume, within volume 25, consisting of:

A volume of which all inner surface area walls are covered with special thin ceramic tiles. This volume 26, is within volume 25, it has its own closure and is only 25% of volume 25.

This volume is also removable like a box.

7. According to claim 3, with stronger insulation, same system that is based on same principles, is capable to run with one half the energy consumption, that state of the art middle size supermarket refrigerators consume, by enlarging the lengths and consequentially the mass of each conducting cell with same proportions and by having interfaces that have higher rate conduction and having a bigger heat sink, of which the initial nitrogen filling temperature starts off and is kept considerably lower than - 41 C degrees.